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Case No. 6383 ACCS

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Patent No.: 6,868,719

Issued: March 22, 2005

Serial No.: 10/004,719

Examiner: William Oen

Filed: December 4, 2001

Assignee: Dana Corporation

Title: Tire Pressure Monitoring Method

**REQUEST FOR CERTIFICATE OF CORRECTION OF  
PATENT FOR PATENT OFFICE ERROR (37 C.F.R. 1.322)**

Attention: Certificate of Corrections Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Patentee hereby respectfully requests that a Certificate of Correction issue to correct a PTO error occurring in the following claim:

Claim 8, line 14, replace "values" with --value--.

Attached hereto for printing is PTO/SB/44.

Please send the Certificate of Correction and any subsequent correspondence in this case to the undersigned.

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A handwritten signature in cursive script, appearing to read "Patricia Simms", written over a horizontal line.

(Signature) Patricia Simms

Date of Signature: April 5, 2005

Although no fee is believed owed, the Commissioner is authorized to change any fees associated with this correspondence, and credit any overpayments, to Deposit Account No. 04-0060.

Respectfully submitted,

By:   
Kristene M Ragan  
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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,868,719  
DATED : March 22, 2005  
INVENTOR(S) : Stephen P. Claussen and Daryl J. Stacer

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Claim 8, line 14, replace "values" with --value--.

### MAILING ADDRESS OF SENDER:

Dana Technology Inc.  
8000 Yankee Road  
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PATENT NO. 6,868,719

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US006868719B1

(12) **United States Patent**  
**Claussen et al.**

(10) **Patent No.:** **US 6,868,719 B1**  
(45) **Date of Patent:** **Mar. 22, 2005**

- (54) **TIRE PRESSURE MONITORING METHOD**
- (75) Inventors: **Stephen P. Claussen**, Richland, MI (US); **Daryl J. Stacer**, Portage, MI (US)
- (73) Assignee: **Dana Corporation**, Toledo, OH (US)
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
- (21) Appl. No.: **10/004,719**
- (22) Filed: **Dec. 4, 2001**
- (51) Int. Cl.<sup>7</sup> ..... **B60C 23/02**
- (52) U.S. Cl. .... **73/146.2**
- (58) Field of Search ..... **73/146, 146.2, 73/146.5, 146.8; 340/442-448; 152/415, 419**
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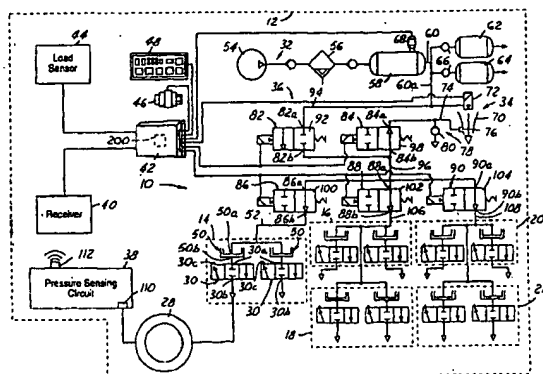
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#### (57) ABSTRACT

A method of monitoring the fluid pressure of, with a sensor of a tire pressure management system disposed without, a tire that prevents overinflation of same. The method of monitoring a fluid pressure of a tire with a sensor, disposed in conduit assemblies for conducting fluid to or from the tire, of a tire pressure management system includes providing a pulse of compressed fluid to the conduit assemblies, unless a counter exceeds a count, the fluid in the conduit assemblies thereafter having a conduit pressure. The pulse has a duration that corresponds to a ratio defined by a first predetermined amount divided by a second predetermined amount.

14 Claims, 3 Drawing Sheets



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comparing said first fluid pressure to a target pressure;  
 providing a pulse of compressed fluid to said conduit  
 when said first fluid pressure is less than said target  
 pressure, said pulse having a duration determined  
 responsive to a duration of a previous pulse of com-  
 pressed fluid provided to said conduit and a change in  
 pressure in said conduit resulting from said previous  
 pulse; and,

repeating said ascertaining, comparing, and providing  
 steps until said first fluid pressure in said conduit  
 reaches said target pressure.

2. The method of claim 1 wherein said first fluid pressure  
 is ascertained following a predetermined hold time that  
 begins after said previous pulse is provided to said conduit.

3. The method of claim 1 wherein said duration of said  
 previous pulse is a preset period.

4. The method of claim 1 wherein said duration of said  
 pulse is determined in accordance with the following for-  
 mula:

$$D_1 = n * D_0 * [(P_T - \text{temp}_1) / (\text{temp}_1 - P_L)]$$

wherein n is a predetermined value,  $D_0$  is said duration of  
 said previous pulse,  $P_T$  is said target pressure, temp1 is  
 said first fluid pressure and  $P_L$  is a previous fluid  
 pressure in said conduit resulting from said previous  
 pulse.

5. The method of claim 1 further comprising the steps of:  
 determining a second fluid pressure in said conduit fol-  
 lowing a predetermined line leak hold time; and,  
 comparing said first and second fluid pressures.

6. The method of claim 5 wherein said tire pressure equals  
 said first fluid pressure if a difference between said first and  
 second fluid pressures is less than a predetermined amount.

7. The method of claim 5 further comprising the step of  
 logging a line leak fault if a difference between said first and  
 second fluid pressures is greater than a predetermined  
 amount.

8. A method of determining a tire pressure in a vehicle tire  
 comprising the steps of:

ascertaining a first fluid pressure in a conduit disposed  
 between a fluid source and said tire using a sensor  
 disposed in said conduit;

comparing said first fluid pressure to a target pressure;  
 incrementing a counter when said first fluid pressure is  
 less than said target pressure;

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comparing said counter to a predetermined value;

providing a pulse of compressed fluid to said conduit  
 when said first fluid pressure is less than said target  
 pressure and said counter is less than said predeter-  
 mined value, said pulse having a duration determined  
 responsive to a duration of a previous pulse of com-  
 pressed fluid provided to said conduit and a change in  
 pressure in said conduit resulting from said previous  
 pulse; and,

repeating said ascertaining, comparing, and providing  
 steps until said first fluid pressure in said conduit  
 reaches said target pressure or said counter reaches said  
 predetermined values.

9. The method of claim 8 wherein said first fluid pressure  
 is ascertained following a predetermined hold time that  
 begins after said previous pulse is provided to said conduit.

10. The method of claim 8 wherein said duration of said  
 previous pulse is a preset period.

11. The method of claim 8 wherein said duration of said  
 pulse is determined in accordance with the following for-  
 mula:

$$D_1 = n * D_0 * [(P_T - \text{temp}_1) / (\text{temp}_1 - P_L)]$$

wherein n is a predetermined value,  $D_0$  is said duration of  
 said previous pulse,  $P_T$  is said target pressure, temp1 is  
 said first fluid pressure and  $P_L$  is a previous fluid  
 pressure in said conduit resulting from said previous  
 pulse.

12. The method of claim 8, further comprising the steps  
 of:

determining a second fluid pressure in said conduit fol-  
 lowing a predetermined line leak hold time; and,  
 comparing said first and second fluid pressures.

13. The method of claim 12 wherein said tire pressure  
 equals said first fluid pressure if a difference between said  
 first and second fluid pressures is less than a predetermined  
 amount.

14. The method of claim 12 further comprising the step of  
 logging a line leak fault if a difference between said first and  
 second fluid pressures is greater than a predetermined  
 amount.

\* \* \* \* \*